



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,349	03/07/2002	Hyun-Suk Yang	SEC.919	7717

20987 7590 12/03/2004

VOLENTINE FRANCO, & WHITT PLLC
ONE FREEDOM SQUARE
11951 FREEDOM DRIVE SUITE 1260
RESTON, VA 20190

EXAMINER

BRAHAN, THOMAS J

ART UNIT PAPER NUMBER

3652

DATE MAILED: 12/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/092,349

Applicant(s)

YANG, HYUN-SUK

Examiner

Thomas J. Brahan

Art Unit

3652



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4 and 6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Art Unit: 3652

1. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 4, and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Foulke et al in view of Holbrooks. Foulke et al shows a reticle transfer and storage system comprising:

a reticle library (16);

a plurality of reticle cassettes (16a) supported in the reticle library;

a fork arm (70) disposed adjacent the cassettes, the fork arm comprising a base, and a plurality of tines for supporting a reticle, each of the tines having a base end at which the tine is integral with and extends from the base, and a distal end remote from the base end, and the fork arm being movable horizontally and vertically in a working range that encompasses the interior of each of the cassettes so as to be capable of withdrawing a reticle stored in any of the cassettes;

a linear carrier (130) disposed outside of the library and movable to a position within the working range of the fork arm; and

a plurality of position sensors (78) disposed on the fork arm, so as to together enable the detection of whether a reticle is properly positioned relative to the tines of the fork arm.

Foulke et al varies from the claims by not specifying a location for the sensors (70) as to have them located at the bases of the tines, and by not having them activate an alarm. Figure 9 of Holbrooks shows a similar fork arm with spaced tines and teaches having sensors at the base of the tines, see column 8, lines 25-27, and column 9, lines 49-67. The sensor system of Holbrooks also includes an alarm system, see column 10, lines 28-32. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the transfer system of Foulke et al by having its plural tine sensors located at base ends of the tines, for accurate measuring of the article positioning, and to provide it with alarms to indicate improperly positioned articles, both as taught by Holbrooks. It would further have been obvious to use photo sensors as the sensing means for Foulke et al, as recited in claims 3 and 6, as this is also taught by Holbrooks, see column 9, lines 51-56.

3. Claims 1, 3, 4 and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nakahara et al in view of Holbrooks. Nakahara et al shows a reticle transfer and storage system comprising:

a reticle library (1);

a plurality of reticle cassettes (2) supported in the reticle library (1);

a fork arm (3) disposed adjacent the cassettes, the fork arm comprising a base, and a plurality of tines for

Art Unit: 3652


supporting a reticle, each of the tines having a base end at which the tine is integral with and extends from the base, and a distal end remote from the base end, and the fork arm being movable horizontally and vertically in a working range that encompasses the interior of each of the cassettes so as to be capable of withdrawing a reticle stored in any of the cassettes; and

a linear carrier (4) disposed outside of the library and movable to a position within the working range of the fork arm;

Nakahara et al varies from the claims by not having a sensor/alarm system on the fork tines for detecting an improperly placed reticle. Figure 9 of Holbrooks shows a similar fork arm with spaced tines and teaches having plural sensors at the base of the tines, see column 9, lines 61-67. The sensor system of Holbrooks also includes an alarm system, see column 10, lines 28-32. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the transfer system of Nakahara et al with a sensor system with plural sensors at the base ends of the tines, to indicate when the tines are loaded improperly, as taught by Holbrooks. The sensors of Holbrooks are photo sensors, see column 9, lines 51-56, as recited in claims 3 and 6.

4. Applicant argues in the amendment filed September 17, 2004, that Holbrooks would not motivate one of ordinary skill in the art to equip a reticle transfer means with sensors. However as the reticle art and the wafer art are analogous, one of ordinary skill in the art would incorporate the tine sensor of Holbrooks onto the tines of Nakahara et al. As the tines of Foulke et al are already disclosed as having sensors, one of ordinary skill in the art would recognize that the specifics of the Holbrooks sensor arrangement can be combined with the broad teaching of sensors on the tines in Foulke et al.

5. An inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Brahan whose telephone number is (703) 308-2568. The examiner's supervisor, Ms. Eileen Lillis, can be reached at (703) 308-3248. The fax number for all patent applications is (703) 872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Questions regarding access to the Private PAIR system, should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

 11/27/04
Thomas J. Brahan
Primary Examiner
Art Unit 3652